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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,005	02/17/2004	Frank M. Simonutti	WG0057H	9568

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EXAMINER

HUNTER, ALVIN A

ART UNIT PAPER NUMBER

3711

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

81

<b>Office Action Summary</b>	Application No. 10/780,005	Applicant(s) SIMONUTTI ET AL	
	Examiner Alvin A. Hunter	Art Unit 3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,8,10-13,18,19,28-30,32-34,36,37,41,42 and 57-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,8,10-13,18,19,28-30,32-34,36,37,41,42 and 57-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 5, 8, 10, 13, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 5779561) in view of Sullivan et al. (USPN 5984806) and Sullivan (USPN 5306760).

In regards to claims 1 and 8, Sullivan et al. '561 discloses a golf ball comprising a solid center 10 having a deflection, under an applied static load of 200 lb., of between about 0.100 inches and about 0.140 inches, equivalent to a PGA compression of 60 to 100; at least one intermediate layer 14 comprised of thermoplastic material; and a cover layer 16 comprising an ionomer or ionomer blend and having a Shore D hardness, measured on the curved surface of the golf ball, of greater than about 60 (See Summary of the invention, Column 7, lines 21 through 23; Paragraph bridging columns 10 and 11; and paragraph bridging columns 13 and 14 and Figure 1). It is submitted that the being that the structure the golf ball has been met, being struck by a driver club at a clubhead velocity of about 160 feet-per-second and an initial velocity off the clubhead of greater than about 240 feet-per-second is inherently met by Sullivan et al. Sullivan et al. '561 notes that the intermediate layer may contain an ionomer, but does not disclose the type of ionomer. Sullivan et al. '806 discloses a golf ball comprising

Art Unit: 3711

an ionomer made of a copolymer of ethylene and acrylic acid wherein the ionomer is totally neutralized with metal ions (See Column 18, lines 28 through 42). It is further noted that the composition may contain a monomer of an acrylic ester class, wherein Sullivan et al. '806 recognizes that butyl acrylate is within the acrylate ester class (See Column 17, lines 30 through 41 and Column 21, lines 24 through 40). One having ordinary skill in the art would have found it obvious to incorporate an copolymer of ethylene and acrylic acid and n-butyl acrylate, wherein about 100% of the acid is neutralized with metal ions, as taught by Sullivan et al. '806, into that of Sullivan et al. '561 in order to increase the durability of the golf ball. Sullivan '760 discloses a golf ball cover composition made of an ionomer resin wherein the composition is neutralized by a fatty acid wherein the fatty acid are substitutable for each other and are from the group of metal stearetes, metal oleates, metal palmitates, metal pelargonates, metal laureates (See Abstract). It should also be noted that Sullivan '806 teaches that the intermediate layer can also constitute a part of the cover. Applicant does not discloses why the use of magnesium oleate is critical in order to attain the invention; therefore, one ordinarily skilled in the art would have concluded in view of Sullivan '760 that any type of fatty acid would have been sufficient to use within the ionomer resin of the intermediate layer.

In regards to claim 2, Sullivan et al. '561 discloses the golf ball having a coefficient of restitution of at least 0.750 (See Summary of the invention). Sullivan et al. '561 noted that the COR was test with a velocity of 125+ 5 fps (See Column 4, lines 62 through 67). Being that the COR is linearly related to the velocity, it is submitted that

Art Unit: 3711

the golf ball of Sullivan et al. has a COR of greater than 0.815 at a test velocity of 150 fps.

In regards to claim 5, Sullivan et al. '516 discloses the at least one intermediate layers having a Shore D hardness as measured on the curved outer surface of the at least one intermediate layer of less than 65.

In regards to claims 10 and 13, Sullivan et al. '516 discloses the ball having a diameter of at least 1.680 in. (See Column 7, lines 5 and 6). Applicant does not disclose why a diameter of less than 1.68 inches is necessary to attain the invention. One having ordinary skill in the art would have found such to be an obvious matter of design choice. The diameter of Sullivan would perform equally as well because it reduces backspin which inherently produces a more balanced golf ball.

In regards to claims 18 and 19, Sullivan et al. '561 discloses the mantle 14 comprising density increasing fillers such as tungsten (See Columns 8 and 9).

2. Claims 28-30, 32, 36, 37, 41, 42, and 64-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 5779561) in view of Sullivan (USPN 5984806) and Yamada et al. (USPN 5585440).

In regards to claim 28 and 67, Sullivan et al. '561 discloses a golf ball comprising a solid center 10 having a deflection, under an applied static load of 200 lb., of between about 0.100 inches and about 0.140 inches, equivalent to a PGA compression of 60 to 100; at least one intermediate layer 14 comprised of thermoplastic material; and a cover layer 16 comprising an ionomer or ionomer blend and having a Shore D hardness, measured on the curved surface of the golf ball, of greater than about 60 (See

Art Unit: 3711

Summary of the invention, Column 7, lines 21 through 23; Paragraph bridging columns 10 and 11; and paragraph bridging columns 13 and 14 and Figure 1). It is submitted that the being that the structure the golf ball has been met, being struck by a driver club at a clubhead velocity of about 160 feet-per-second and an initial velocity off the clubhead of greater than about 240 feet-per-second is inherently met by Sullivan et al. '561. Sullivan et al. '561 notes that the intermediate layer may contain an ionomer, but does not disclose the type of ionomer. Sullivan et al. '806 discloses a golf ball comprising an ionomer made of a copolymer of ethylene and acrylic acid wherein the ionomer is totally neutralized with metal ions (See Column 18, lines 28 through 42). It is further noted that the composition may contain a monomer of an acrylic ester class, wherein Sullivan et al. '806 recognizes that butyl acrylate is within the acrylate ester class (See Column 17, lines 30 through 41 and Column 21, lines 24 through 40). One having ordinary skill in the art would have found it obvious to incorporate a copolymer of ethylene and acrylic acid and n-butyl acrylate, wherein about 100% of the acid is neutralized with metal ions, as taught by Sullivan et al. '806, into that of Sullivan et al. '561 in order to increase the durability of the golf ball. Sullivan et al. '561 does not explicitly disclose the core synthesized with neodymium. Yamada et al. discloses a rubber composition for use as a golf ball core wherein the composition comprises a high-cis (more than 40%) content polybutadiene rubber wherein the rubber is synthesized with a neodymium catalyst (See Summary of the invention). One having ordinary skill in the art would have found it obvious to have the core comprise of a high

Art Unit: 3711

cis polybutadiene catalyzed with neodymium, as taught by Yamada et al., in order to improve the workability, processability, and impact resilience of the golf ball.

In regards to claims 29 and 68, Sullivan et al. '561 discloses the golf ball having a coefficient of restitution of at least 0.750 (See Summary of the invention). Sullivan noted that the COR was test with a velocity of 125+ 5 fps (See Column 4, lines 62 through 67). Being that the COR is linearly related to the velocity, it is submitted that the golf ball of Sullivan et al. has a COR of greater than 0.815 at a test velocity of 150 fps.

In regards to claims 30 and 64, Yamada et al. discloses the polybutadiene comprising a high cis-1,4 content polybutadiene and the core further comprising about 5 to about 60 parts by weight of a co-crosslinking agent comprised primarily of a zinc salt of an unsaturated acrylate, about 5 to about 60 parts by weight of a metal oxide activator, and about 0.1 to about 10 parts per hundred resin of a free radical initiator (See Columns 3 through 5).

In regards to claim 32, Sullivan et al. '806 discloses the thermoplastic material comprising about 80% ethylene, 8-10.5% acrylic acid and about 12 to 20% n-butyl acrylate, being that low acid ionomers inherently have an acid content of less than 16% and can be combined with a comonomer (See Column 17, lines 30 through 45).

In regards to claims 36 and 37, Sullivan et al. discloses the ball having a diameter of at least 1.680 in. (See Column 7, lines 5 and 6). Applicant does not disclose why a diameter of less than 1.68 inches is necessary to attain the invention. One having ordinary skill in the art would have found such to be an obvious matter of

Art Unit: 3711

design choice. The diameter of Sullivan would perform equally as well because it reduces backspin which inherently produces a more balanced golf ball.

In regards to claims 41 and 42, Sullivan et al. '561 discloses the mantle 14 comprising density increasing fillers such as tungsten (See Columns 8 and 9).

In regards to claims 65 and 66, Sullivan et al. '561 disclose in the examples that the golf ball having a weight of 43.8 to 45.9 grams. Applicant does not disclose why the weight ranges claimed are critical in order to attain the invention. Being that the examples do not limit the invention thereto, one having ordinary skill in the art would have drawn from Sullivan et al. '561 that the weight of the golf ball can be of any value so long as the goals of the invention are attained.

3. Claims 59-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 5779561) in view of Sullivan (USPN 5984806) and Yamada et al. (USPN 5585440) further in view of Sullivan (USPN 5306760).

In regards to claim 59, Yamada et al. discloses the polybutadiene comprising a high cis-1,4 content polybutadiene and the core further comprising about 5 to about 60 parts by weight of a co-crosslinking agent comprised primarily of a zinc salt of an unsaturated acrylate, about 5 to about 60 parts by weight of a metal oxide activator, and about 0.1 to about 10 parts per hundred resin of a free radical initiator (See Columns 3 through 5).

In regards to claims 60 and 61, Sullivan et al. '561 disclose in the examples that the golf ball having a weight of 43.8 to 45.9 grams. Applicant does not disclose why the weight ranges claimed are critical in order to attain the invention. Being that the



Art Unit: 3711

examples do not limit the invention thereto, one having ordinary skill in the art would have drawn from Sullivan et al. '561 that the weight of the golf ball can be of any value so long as the goals of the invention are attained.

Regarding claims 62 and 63, Sullivan '760 discloses a golf ball cover composition made of an ionomer resin wherein the composition is neutralized by a fatty acid wherein the fatty acid are substitutable for each other and are from the group of metal stearetes, metal oleates, metal palmitates, metal pelargonates, metal laureates (See Abstract). It should also be noted that Sullivan '806 teaches that the intermediate layer can also constitute a part of the cover. Applicant does not disclose why the use of magnesium oleate is critical in order to attain the invention; therefore, one ordinarily skilled in the art would have concluded in view of Sullivan '706 that any type of fatty acid would have been sufficient to use within the ionomer resin of the intermediate layer. Sullivan also notes that the fatty acid is present in greater than 10 pph resin (See Abstract).

4. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 5779561) in view of Sullivan (USPN 5984806) and Sullivan (USPN 5306760) further in view of Yamagishi et al. (USPN 5779563).

In regards to claim 11, the combination above does not disclose the core, intermediate layer, and cover layer having approximately the same specific gravity. Yamagishi et al. discloses a golf ball having a core 1, intermediate layer 2 and cover 3 having approximately the same specific gravity (See Column 2, lines 64 and 65; Paragraph bridging Columns 3 and 4; and Column 4 lines 28 through 33). On having

Art Unit: 3711

ordinary skill in the art would have found it obvious to have the core, intermediate layer, and cover layer having approximately the same specific gravity, as taught by Yamagishi et al., in order to improve the golf ball's distance, controllability, roll and straight travel. In regards to the solution, it is submitted that the combination would perform such act, being that the limitation requires testing in which the applicant is aware the office has not means of doing.

In regards to claim 12, Yamagishi et al. discloses the specific gravity between the core, intermediate layer, and cover being 1.02 to 1.18, 1.10-1.25, and 0.9 to 1.2, wherein the cover is greater than the core by at least 0.01 (See Column 2, lines 64 and 65; Paragraph bridging Columns 3 and 4; and Column 4 lines 28 through 33).

5. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 5779561) in view of Sullivan (USPN 5984806) and Yamada et al. (USPN 5585440) further in view of Yamagishi et al. (USPN 5779563).

In regards to claim 33, the combination above does not disclose the core, intermediate layer, and cover layer having approximately the same specific gravity. Yamagishi et al. discloses a golf ball having a core 1, intermediate layer 2 and cover 3 having approximately the same specific gravity (See Column 2, lines 64 and 65; Paragraph bridging Columns 3 and 4; and Column 4 lines 28 through 33). On having ordinary skill in the art would have found it obvious to have the core, intermediate layer, and cover layer having approximately the same specific gravity, as taught by Yamagishi et al., in order to improve the golf ball's distance, controllability, roll and straight travel. In regards to the solution, it is submitted that the combination would perform such act,

Art Unit: 3711

being that the limitation requires testing in which the applicant is aware the office has not means of doing.

In regards to claim 34, Yamagishi et al. discloses the specific gravity between the core, intermediate layer, and cover being 1.02 to 1.18, 1.10-1.25, and 0.9 to 1.2, wherein the cover is greater than the core by at least 0.01 (See Column 2, lines 64 and 65; Paragraph bridging Columns 3 and 4; and Column 4 lines 28 through 33).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-56 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Vidovich, can be reached on 571-272-4411. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 3711

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AAV

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